

I CLAIM:

1. A method for making a composite tool having a steel shank and a working head that is connected to the steel shank and that is made from metal carbide, the method
5 comprising the steps of:

(a) forming a recess in the working head such that the recess is indented inwardly from a first joint face of the working head in a transverse direction relative to the first joint face, the recess
10 having a cylindrical section that extends in the transverse direction and that is distal from the first joint face, and a skirt section that flares outwardly from the cylindrical section to the first joint face and that has an outer edge adjacent to the first joint
15 face;

(b) forming a cylindrical protrusion on a second joint face of the steel shank such that the cylindrical protrusion has a diameter greater than that of the cylindrical section of the recess and
20 smaller than that of the outer edge of the skirt section of the recess;

(c) inserting the cylindrical protrusion of the steel shank into the recess in the working head and pressing the steel shank and the working head against
25 each other in such a manner that the cylindrical protrusion is deformed to completely fill the recess, that the first and second joint faces abut against

each other to define a contact region therebetween,
and that the working head and the steel shank
cooperatively define a shoulder around the contact
region, the shoulder defining a corner adjacent to
5 the contact region; and

(d) forming a solder joint on the corner by
welding.

2. The method of Claim 1, wherein the solder joint
is formed by applying a solder material on the corner
10 of the shoulder and subsequently melting the solder
material under vacuum conditions.

3. A method for making a composite tool having a steel
shank and a working head that is connected to the steel
shank and that is made from metal carbide, the method
15 comprising the steps of:

(a) forming a generally conical recess in the
steel shank such that the recess is indented inwardly
from a first joint face of the steel shank in a
transverse direction relative to the first joint face,
20 the recess having a depth in the transverse direction;

(b) forming a generally conical protrusion on
a second joint face of the working head such that the
conical protrusion has dimensions respectively
proportional to those of the recess, and a height,
25 which is measured from a vertex of the conical
protrusion to the second joint face, greater than the
depth of the recess;

(c) inserting the conical protrusion of the working head into the recess in the steel shank and pressing the steel shank and the working head against each other in such a manner that the conical recess is enlarged by the conical protrusion, that the conical protrusion completely fills the recess, that the first and second joint faces abut against each other to define a contact region therebetween, and that the working head and the steel shank cooperatively define a shoulder around the contact region; the shoulder defining a corner adjacent to the contact region; and

(d) forming a solder joint on the corner by welding.